

Pai et al.
June 23, 2004

Page 3

In the Claims:

Please amend claims 5, 6, 14, 15 and 18. A detailed listing of the claims is provided, below.

1. (Original) A clinical method of assessing spinal reposition sense, said method comprising:

providing a test subject engaged in thoracolumbar movement, said movement comprising a plurality of flexion positions within a range of motion through the sagittal plane;

selecting one said flexion position, said position having a vertical coordinate and a horizontal coordinate;

recording a subject reposition in said sagittal plane, said reposition sensed by said subject responsive to said selected position, said reposition having a vertical coordinate and a horizontal coordinate; and

comparing said reposition with said selected position.

2. (Original) The method of claim 1 wherein said selected position and said recorded reposition have a horizontal coordinate measured at C7-T4.

3. (Original) The method of claim 2 wherein said horizontal coordinate is measured at the T4 spinal process.

4. (Original) The method of claim 1 wherein said subject is asymptomatic.

5. (Currently Amended) The method of claim 1 wherein said plurality of flexion positions are selected from the group consisting of full flexion range of motion, one-third flexion range of motion and two-thirds flexion range of motion.

6. (Currently Amended) The method of claim 1 wherein said recorded reposition comprises an a recordation average of said recordations.

7. (Original) The method of claim 1 wherein said subject reposition is substantially without cutaneous input.

Pai et al.
June 23, 2004

Page 4

8. (Original) The method of claim 1 wherein said subject reposition is substantially without visual input.

9. (Original) A method of using linear coordinates to determine angle of thoracolumbar flexion in the sagittal plane, said method comprising:

positioning a subject seated on a substantially level seating surface;
providing a vertical reference and measuring a vertical linear coordinate at C7-T4 on said subject;

measuring a horizontal linear coordinate from said vertical reference at C7-T4 on said subject, said horizontal coordinate at a right angle to said vertical reference; and

trigonometrically determining an angle of flexion of the thoracolumbar spine in the sagittal plane with said measured linear coordinates.

10. (Original) The method of claim 9 wherein said subject is seated at a distance apart from said vertical reference.

11. (Original) The method of claim 9 wherein said subject is positioned throughout a range of motion within the sagittal plane.

12. (Original) The method of claim 11 wherein said subject is positioned at least one of one-third full flexion and two-thirds full flexion range of motion.

13. (Original) The method of claim 9 wherein said determination assesses thoracolumbar reposition sense.

14. (Currently Amended) A system for determining thoracolumbar position in the sagittal plane, said system comprising:

a vertical reference component, a horizontal reference component and a reference housing component, said vertical and horizontal reference components positioned substantially perpendicular one to another with within said housing component; and

a substantially level seat component supporting said vertical reference component and substantially perpendicular therewith.

Pai et al.
June 23, 2004

Page 5

15. (Currently Amended) The system of claim 13 or 14 wherein said housing component defines at least one aperture therethrough.

16. (Original) The system of claim 14 wherein said seat component further includes a substantially vertical member a distance apart from said vertical reference component.

17. (Original) The system of claim 14 wherein said horizontal reference component further includes a leveling device thereon.

18. (Currently Amended) A method of using the system of claim 14 as a system for determining thoracolumbar position in the sagittal plane to clinically assess spinal reposition sense, said method comprising:

providing a thoracolumbar measurement system having a vertical reference component, a horizontal reference component and a reference housing component, said vertical and horizontal reference components positioned substantially perpendicular one to another with within said housing component, and a substantially level seat component supporting said vertical reference component substantially perpendicular therewith;

engaging a test subject seated on said system in thoracolumbar movement, said movement comprising a plurality of flexion positions within a range of motion through the sagittal plane;

selecting one said flexion position, said position having a vertical coordinate and a horizontal coordinate;

recording a subject reposition in said sagittal plane, said reposition sensed by said subject responsive to said selected position, said reposition having a vertical coordinate and a horizontal coordinate; and

comparing said reposition with said selected position.

19. (Original) The method of claim 18 wherein said selected position and said recorded reposition have vertical and horizontal coordinates measured at C7-T4 on said subject.

Pai et al.
June 23, 2004

Page 6

20. (Original) The method of claim 18 wherein said subject is positioned throughout a range of motion within the sagittal plane.

21. (Original) The method of claim 18 wherein said subject reposition is substantially without cutaneous input.

22. (Original) The method of claim 18 wherein said subject reposition is substantially without visual input.